



# naval meteorology and oceanography

September 22, 2009

## Commander's Column



Rear Adm. David  
Titley

The United States Naval Observatory (USNO), while a relative newcomer to the Naval Meteorology and Oceanography Command, has a long history as the true “birthplace” of Naval Oceanography, and remains one of the most vital links in the chain of our nation’s defense.

Today’s warfighter operates systems in environments ranging from the deepest ocean trenches to the far reaches of outer space. USNO’s products allow for precise navigation, location and information dominance across these diverse environments. Position, Navigation, and Timing (PNT) provide the backbone of our modern defense systems, and USNO directly enables critical PNT capability requirements through four closely-coupled mission areas.

Through Astrometry, USNO determines the precise celestial reference frame that forms the basis for locating virtually everything in three-dimensional space. Its star catalogs are used not only as benchmarks for space-based and terrestrial navigation and orientation reference, but also as critical elements in Space Situational Awareness.

Through Astronomical Applications, USNO produces almanacs and software for Department of Defense (DoD) and civilian use. Included here is cutting-edge development of celestial navigation systems that will provide a capable backup system to the Global Positioning System (GPS), along with high-accuracy orientation requirements for ballistic missile defense.

By observing and analyzing Earth Orientation, USNO tracks minute but significant changes in the Earth’s rotational and polar orientation parameters, and links this terrestrial motion to the satellite (GPS, etc) reference frame. Without this critical linkage, accuracy of space-based positioning systems would degrade significantly over time. These data are vital for precision targeting and serving the needs of high accuracy navigation users.

Finally, USNO’s Time Service Department provides the “master clock” used by all DoD systems. It serves as the time reference scale for GPS, providing time scales accurate to better than a billionth of a second per day. It is also the source for Network Time Protocol, which serves as the time “backbone” of our digital communications networks. The Clock Development team at USNO is finalizing development of Rubidium Atomic Fountain clocks, which will improve timing capabilities by an order of magnitude.

The men and women of the USNO, along with their counterparts across our community, continue to demonstrate world-class talent, innovation and commitment to excellence that prove once again that Naval Oceanography’s best asset is its people.

All the Best,  
Rear Adm. David Titley

## Items of Interest

### USS Makin Island Arrives at Homeport in San Diego

Written by: Lt. Chuck Browder



AGC David Fuller, AG1 Joseph McGonis, AG1 Glenn Kleiner, AG3 Anthony Tills, AG3 Terra Kern, AG3 Quinn Challinor, AGAN Trent St. Michael, AG3 Brian Stone, AG2 Christopher Lewin, Lt. Chuck Browder and AG3 Anthony Bastianelli.

The Navy's newest multi-purpose amphibious ship, USS Makin Island (LHD 8), arrived at her homeport in San Diego, Calif. Monday Sept. 14, ending her 14,000 mile maiden deployment from Pascagoula Miss. which began July 6.

USS Makin Island brought more than 1,000 Sailors and their families to the community. Strike Group Oceanography Team San Diego provided exceptional support during this deployment and contributed Makin Island's safe winter transit around South America.

Makin Island was the last amphibious assault ship built in the LHD-1 Wasp-class, but the first of the class built with gas turbine engines and an electric drive. This advancement results in significant fuel conservation. For instance, during transit from Mississippi to California, she saved over \$2.25 million in fuel compared to a steam LHD making the same transit. That is nearly 950,000 gallons and a 38 percent savings.

Makin Island is scheduled to be formally commissioned Oct. 24, in a ceremony in San Diego.

### CJTF-HOA Meteorologists Share Technology with Djibouti

Written by: Petty Officer 1st Class Jonathan Kulp

Service members assigned to Combined Joint Task Force-Horn of Africa installed an antenna at the Ambouli International Airport to facilitate meteorological information sharing between Camp Lemonier and local weather forecasters in Djibouti, Sept. 5.

The high-frequency, line-of-sight antenna will allow Djiboutian weather forecasters to receive a steady stream of information from CJTF-HOA's AN/TMQ-53 Tactical Meteorological Observing System. The system is designed to assist weather teams through a collection of sensors connected to a computer.

"We use an automated system, which basically means that every hour the sensor takes an observation," said Lt. Cmdr. Ricardo Trevino, head of CJTF-HOA's Meteorological and Oceanographic Department. "If weather conditions meet criteria for special observations, such as when it starts raining, when thunderstorms or lightening is detected or when the ceiling drops to a certain level, the sensor itself takes an automated observation."

To read the full story visit, [http://www.dvidshub.net/?script=news/news\\_show.php&id=38502](http://www.dvidshub.net/?script=news/news_show.php&id=38502).

### Polar Operations Bring Brothers aboard USCGC Healy

Written by: Cmdr. Bill Sommer

For six weeks this summer, brothers Capt. Fred Sommer, commanding officer, USCGC Healy, and Cmdr. Bill Sommer, shared a once in a lifetime opportunity to serve together on the high seas.

Separated by seven years in age and serving in different specialties within different services, the odds of the two officers ever crossing paths professionally was slim. Fred Sommer's Coast Guard career largely centers on icebreaking and civil engineering. Bill Sommer's career began in Surface Warfare before transferring to Meteorology and Oceanography officer.

In June 2008, the unlikely circumstance began developing.

Fred took command of USCGC Healy, the Coast Guard's largest cutter and icebreaker. Healy is more than an icebreaker though. She is also a one-of-a-kind ocean survey ship hosting oceanographic, hydrographic and meteorological capabilities.

Then, early this spring, the Chief of Naval Operations appointed Rear Adm. David Titley, Commander, Navy Meteorology and Oceanography Command (CNMOC), to the post of Oceanographer of the Navy and tasked him with leading the Navy's Task Force Climate Change (TFCC). The first order of business for TFCC was assessing and understanding the implications of the change in the Arctic for future naval operations.

In addition to the larger Navy questions, CNMOC needed to evaluate the performance of the numerical forecast models and their ability to support the nation's maritime forces in the Arctic.

Seeing an opportunity for the Navy to build its corporate knowledge and experience, Fred extended Healy's invitation to embark a Navy Officer, to his brother.

"Bill and I were discussing the Navy's interest in Arctic operations," said Fred. "I knew we were likely to have a rack available and suggested the Navy send an experienced officer who could share our knowledge of polar operations with the rest of the Navy."

Appropriate candidates were sought within the Meteorology and Oceanography community and Bill was surprised to find his name among the nominations. He gladly answered the call.

"I've always held a tremendous respect for my big brother, so the opportunity to come aboard Healy to learn the polar business from him is a tremendous personal gift," said Bill. "Professionally, the mission [was] also hugely satisfying. I've stood watch, completed the qualification requirements for Officer of the Deck Icebreaking, worked alongside a world-class team led by Dr. Mayer (Chief Scientist for the Healy mission) learning the hydrographic mission; and collected additional oceanographic and atmospheric observations supporting modeling efforts ashore. Literally, the whole scope of my naval career has been brought to bear here, from SWO to Oceanographer."

Fred Sommer was equally pleased to serve with his brother.

"It's been a happy coincidence to serve with Bill," Fred said. "We were both in the right jobs at the right time for our 'joint' effort to make sense. It's a once-in-a-lifetime opportunity, and made this trip even more memorable."



USCG Officer of the Deck Capt. Fred Sommer (right), watches as Cmdr. Bill Sommer (left) U.S. Navy, navigates USCGC HEALY into station ahead of the Canadian icebreaker CCGS Louis S. St. Laurent. Photographed by: PA3 Patrick Kelly

## Training

### Yasutomo Kiyohara Earns Qualification

Written by: Lt. Anthony Eastin

On August 5, 2009, Yasutomo Kiyohara earned a Forecast Duty Officer Qualification (FDO) at Naval Oceanography Antisubmarine Warfare Center (NOAC), Yokosuka, Japan. Kiyohara joined the NOAC team on April 1, 2009 and is the first Japanese Master Labor Contract meteorologist in the center's history to serve in this capacity. In this new position, Kiyohara provides regional forecast expertise and supports NOAC's resource protection mission in support of Commander, Naval Forces Japan. Kiyohara holds a Master's Degree in meteorology from Kobe University.



## SGOT Fallon Carrier Air Wing Training Detachment

Written by: Lt. Cmdr. Keith Everett and Kate Hunte

Members of Strike Group Oceanography Team (SGOT) Norfolk, SGOT Fallon and Carrier Strike Group Ten (CSG) recently completed Fallon Carrier Air Wing Detachment Training in support of Carrier Air Wing Three (CVW 3), and received their capstone pre-deployment aviation certification.

This four-week exercise at the Naval Strike and Air Warfare Center (NSAWC) at NAS Fallon provides three phases of training to CVWs and assigned Squadrons. The training ends with an advanced simulation of an opposed air warfare campaign. Meteorology and Oceanography (METOC) Officers from CVNs and CSG staffs attend the Strike Leader Attack Training Syllabus (SLATS) during the first three days of the Fallon Detachment to familiarize themselves with Strike Warfare missions.

Lt. Cmdr. Micah Weltmer, CSG 10 Staff METOC Officer, attended SLATS. Aerographer's Mate 2<sup>nd</sup> Class Joanna Delaney (SGOT Norfolk), Aerographer's Mate 3<sup>rd</sup> Class Matthew Palkovic (SGOT, Norfolk), and Aerographer's Mate 1<sup>st</sup> Class Timothy Harris (SGOT Fallon), all assigned to USS Harry Truman (CVN 75), worked closely with the pilots and intelligence officers as well as NSAWC staff and SGOT Fallon forecasters to provide comprehensive environmental support to CVW 3 for over fifty training missions during the twenty flying days of the detachment.

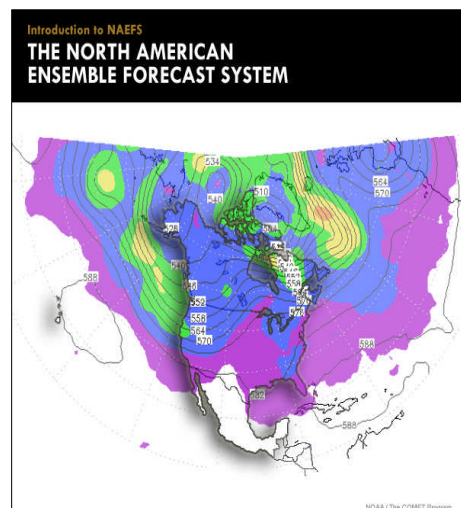


From left to right: AG2 Joanna Delaney and AG1 Timothy Harris.

## COMET Program Posts NAEFS Webcast

The Cooperative Program for Operational Meteorology, Education and Training has recently posted a webcast of entitled "Introduction to the North American Ensemble Forecast System (NAEFS)". The hour long webcast identifies the ensemble forecast systems, the operational advantages to the NAEFS and how NAEFS can be used.

To view the webcast and learn more about the NAEFS visit <http://www.meted.ucar.edu/nwp/NAEFS/>.



It is not all about winning and losing however. "The most rewarding aspect of working with the Slidell Magic is being able to work with a great group of young kids and give back to the sport I love," said Addington.

She has been playing basketball since childhood and looks forward to future opportunities to help teach the sport to kids who love it as much as she does.

## Individual Augmentees

### Getting to Know Cmdr. Erika Sauer

Written by: George Lammons and Kate Hunte

*This is the 3<sup>rd</sup> in a series profiling individual augmentees current and former from the meteorology and oceanography community. Individual augmentees are military personnel who are sent to support or "augment" other commands.*

"It was an experience of a lifetime," said Cmdr. Erika Sauer of her Individual Augmentee assignment in March 2008. "I was most fortunate to have that opportunity."

While rewarding, meaningful and a great experience, the Afghanistan tour was far from easy. Sauer commanded one of 12 U.S. Provincial Reconstruction Teams (PRT) - 85-interagency personnel teams focused on working with the leadership at the provincial and village level to address governance and reconstruction.

Sauer was responsible for the expenditure of Commander Emergency Response Program (CERP) funding.

"The idea was to help them establish a means of democracy," she said. Her team met local government officials and discussed their infrastructure needs. Through the Provincial Council (elected), the Provincial Governor and the Line Directors, those needs were prioritized.

In a war-torn and developing country like Afghanistan, the infrastructure needs run the gamut. An unpaved road can make a trip to the hospital take several hours rather than a few minutes; and that lost time could be the difference between life and death.

"Their way of life has not changed much in the last 2000 years," Sauer said. "The people have no central electricity, no running water and no sewage system. They have to haul their daily water needs from a well, sometimes located in another village, several kilometers away. So drilling a well within their village or being able to access a hospital in a much more timely manner is a big deal."

During Sauer's nine-month tour she was routinely in harm's way.

"Whenever anyone from the PRT went outside the wire, there was always the possibility of small arms fire and Improvised Explosive Device attacks," Sauer said. "The base routinely received mortars and rockets at night."

Sauer's team took no casualties, but the International Security Assistance Force (ISAF) Army Battalion assigned to the province to assist the Afghan Police and Army had several casualties and fatalities during the same time period.

And as if working around-the-clock in constant threat of danger was not enough, Sauer had the added challenge, as a woman, of interacting with village elders and government leaders in a conservative Muslim country that traditionally limits contact between women and men outside their families.

The Commander of the Brigade during the Pre-Deployment-Site-Survey visit told Sauer she would be the first female PRT Commander in Khost, and that it would be difficult to gain the trust and cooperation of the Afghans.

Happily, Sauer said, there were no issues. Sauer was honored when the local leadership told her, near the end of her tour, that initially they had been skeptical about a woman PRT Commander. However, they agreed that Sauer's energy, enthusiasm and effectiveness was equal to that of any capable man, and that it was very important for the people of Khost to see a woman demonstrating this equality on a daily basis in their province.

Now Sauer is the Deputy Assistant Chief of Staff for the Naval Meteorology and Oceanography Command Requirements, Programs and Assessments Department. She was most grateful to be able to contribute to the mission and success of one of the 26 ISAF PRTs in Afghanistan, which are making a difference

## Detailer's Column

I'd like to congratulate our newly Command Screened Officers! They are, Capt. Bill Nisley (FNMOC), Capt. (Sel) Oceanography Officer Tim Gallaudet (OPNAV), Cmdr. John Daziens (OPNAV), Cmdr. Ron Shaw (PACOM), Cmdr. Mark Butler (USFF), Cmdr. Tim Smith (JFC, Naples), Cmdr. Nick Vincent (FST), Cmdr. (Sel)

Ron Piret (NOOC), Cmdr.(sel) Sean Robinson (CSFTPac), Cmdr. (Sel) Adam Newton (CUS), and Cmdr. (Sel) Damon Dixon (CNSWC).

The next step in the process is the slating of commanders and captains. I am working closely with CNMOC leadership to determine where and when our senior officers will be moving into their new roles.

I'd like to share Rear Adm. Titley's thoughts on being a senior officer in our community and how you get there:

"...being selected to the senior officer level of the Navy typically involves frequent relocation, sometimes with relatively short notice... Two to three moves as a Commander should be expected. You also need to understand the absolute importance of having BOTH D.C. and TYCOM (Stennis) experience to perform successfully at this level, and especially at the next level. As you mentor your junior officers, please ensure they are aware of this, and that living in different places is part of the Navy adventure many of us have enjoyed and prospered with over the years."

As a reminder, to attend the Naval War College as a senior officer (commander or captain) you MUST have completed JPME phase one. If you have not completed this piece of your professional education, please do so in order to continue your professional development.

I'd like to welcome Lt. Cmdr. Jon (Johnny METOC) Vorrath, and his family, to the cotton fields of Millington. Jon comes to the deputy position after a fantastic tour at CSG 12 and all the experience that brings. He is now in the chair, so please continue your discussions with him.

We appreciate all who continue to step up to fill our high-priority billets. Here are some additional ones... and remember, I can usually go one-up or one-down in rank... If you're interested, give Lt. Cmdr. Vorrath or me, a call.

O4	NGA	VA	Available NOW
O4	NRL	DC	Available NOW
O5	SACT NURC	La Spezia	December 09
O4	NAVAIRSYSCOM	Pax River	December 09
O4	COMNAVFORKOREA	Seoul	FILLED!
O5/6	NWC (student)	Newport	Feb 10
O3	USFF	Norfolk	April 10
O4	USNA	Annapolis	July 10
O4	USMC C&S College (student)	Quantico	July 10
O4	NWC (student)	Newport	July 10

That's it for now from Millington. Keep Charging!

Capt. Jim Pettigrew, PERS 449

### Rear Admiral David Titley

Commander,

Naval Meteorology and Oceanography Command

1100 Balch Boulevard, Stennis Space Center, MS 39529



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Tel: (228) 688-4384 • Fax: (228) 688-4880 • E-mail: [cathy.willis@navy.mil](mailto:cathy.willis@navy.mil)